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REMARKS

Claims 1-45 are all the claims pending in the application. Claim 38 stands objected to upon informalities and under 37 CFR §1.75 as being a substantial duplicate of claim 37, and is amended to overcome this objection. Claim 26 stands rejected under 35 U.S.C. §101. Claims 1-45 stands rejected on prior art grounds. Applicants respectfully traverse these objections/rejections based on the following discussion.

I. Objections to Claim 38

Claim 38 is objected to as being a substantial duplicate of claim 37. In response thereto, claim 38 is amended above to be distinct from claim 37. In view of the foregoing, the Examiner is respectfully requested to withdraw the objection to claim 38.

II. The 35 U.S.C. §101, Rejection

Claim 26 stands rejected under 35 U.S.C. §101. Claims 26-35 have been amended as suggested in the Office Action in order to overcome this rejection. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

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III. The Prior Art Rejections

Claims 1-45 stand rejected under 35 U.S.C. §102(e) as being anticipated by Li (U.S. Patent No. 6,637,013). Applicants respectfully traverse this rejection based on the following discussion.

Li discloses, in a computer-aided design environment, a technique for automating design rule check error corrections in a CAD environment that contemplates the use of an automation program, such as a SKILL program, to automatically and continuously run a design rule check utility program to generate intermediate results which are processed by the automation program and then supplied back to the design rule check utility program again for execution.

However, it is Applicants position that Li does not teach or suggest many features of the invention as defined by the independent claims. More specifically, Applicants submit that Li does not teach or suggest "grouping related statements in said library usage file according to parent-child relationships" as defined by independent claims 1, 26, and 36, "querying for a processing mode for said step using said design data and technology data; performing an audit by reading said library usage file, said processing mode, and an audit rule into a quality monitor program" as defined by independent claim 11, or "wherein said library usage file includes a first INFO statement that has a value which may be checked by said quality monitor program during said audit, and wherein said audit rule includes a second INFO statement which may include a value checking expression used by said quality monitor program during said audit" as defined by

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independent claim 18.

The Office Action proposes that the claimed "grouping related statements in said library usage file according to parent-child relationships" as defined by independent claims 1, 26, and 36, is disclosed in column 7, line 10-column 8, line 30 of Li. However, this portion of Li is merely a programming loop utilized to fix design rule check errors if they are detected (column 7, lines 6-7) and there is nothing contained within the program which would teach or suggest to one ordinary skill in the art that statements within the library usage file should be grouped according to parent-child relationships. Therefore, it is Applicants position that Li does not teach or suggest this claimed feature and that independent claims 1, 26, and 36 are not anticipated by Li.

With the invention, the OBJECT statement was extended to allow grouping of related TASK and INFO statements. The OBJECT is a generalized data object: the chip name or macro, a group of operations and information associated with a phase of the program execution, or any other data object meaningful to the program. Parent-child relationships exist between a PROGRAM and its OBJECTs, and also between an OBJECT and its TASKs and INFOs. With the invention, parent-child organization of the audit rule is similar to the LUF and _conditions_ are used on some PROGRAM, OBJECT, TASK and INFO statements. The condition on a parent record (PROGRAM for OBJECT, and OBJECT for TASK and INFO) controls whether the child records are examined. Further, the audit program is careful to include child records (e.g., OBJECT records associated with a PROGRAM) if the combined parent/child conditions evaluate to true.

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The Office Action also proposes that the claimed "querying for a processing mode for said step using said design data and technology data; performing an audit by reading said library usage file, said processing mode, and an audit rule into a quality monitor program" as defined by independent claim 11, is taught by column 5, line 39-46 of Li. However, this portion of Li merely discusses a technology file that contains design technology information including part of the design rules. Li also explains that the technology file is compiled to bind to each design library and is used to set certain default values to ensure that the circuit geometries are created correctly. In other words, Li is silent regarding the claimed processing steps of querying for a "processing mode" and performing the audit based in part on the processing mode. Thus, it is Applicants position that this claimed feature is also not anticipated by Li.

The invention can identify methodology differences as processing modes and describe these through a statement in a file (control file for QM application). The method of the invention provides an automated method to query design and technology data to identify processing modes used for a part number (query program). In addition, the method can associate general conditions (REQUIRED, OPTIONAL, PROHIBITED) and particular processing modes with methodology items (PROGRAMs, OBJECTs, TASKs, and INFOs) and describe these as additions to an existing file (audit rule condition additions for examining the LUFs). The method of the invention can associate numeric, character, or no values with an INFO item and describe these as additions to an existing file (audit rule INFO values). The automated method of the invention can provide conditional checking of the part number audit trail (LUFs) using processing modes for the part number and technology audit rules coded according to general conditions and technology processing modes (QM conditional checking). The invention is useful with a

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program which reads the audit trail and also reads technology files such as the audit rules, containing conditional and value checking capability, as well as the processing mode file.

With respect to the claimed feature that the "library usage file includes a first INFO statement that has a value which may be checked by said quality monitor program during said audit, and wherein said audit rule includes a second INFO statement which may include a value checking expression used by said quality monitor program during said audit" as defined by independent claim 18, the Office Action proposes that column 7, line 16-18 of Li discloses this feature. However, this portion of the code shown in column 7 and 8 of Li appears to relate to reporting an error associated with the tcfile, and not to any similar processing regarding INFO statement as used in the present invention.

With the invention, a new statement type, the INFO statement, was added to provide a general mechanism for a program to report interesting data which could need value checking. The INFO statement has a field to identify the type of data item (infoName) and a field for its value. The INFO statements increase the reporting ability of the quality monitor program because INFO statements include values to be checked by the quality monitor program during the audit. The method of the invention can associate numeric, character, or no values with an INFO item and describe these as additions to an existing file (audit rule INFO values). The invention allows INFO statements in the audit rule to optionally have conditions specified on them. The conditions describe the circumstances under which that record should be checked by the quality monitor auditing program.

Thus, as shown above, Li does not teach or suggest "grouping related statements in said library usage file according to parent-child relationships" as defined by independent claims 1, 26,

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and 36 "querying for a processing mode for said step using said design data and technology data; performing an audit by reading said library usage file, said processing mode, and an audit rule into a quality monitor program" as defined by independent claim 11, or "wherein said library usage file includes a first INFO statement that has a value which may be checked by said quality monitor program during said audit, and wherein said audit rule includes a second INFO statement which may include a value checking expression used by said quality monitor program during said audit" as defined by independent claim 18. Thus, it is Applicants position that independent claims 1, 11, 18, 26, and 36 are not anticipated by Li and are patentable over the prior art of record. Further, dependent claims 2-10, 12-17, 19-25, 27-35, 37, and 39-45 are similarly patentable, and only because they depend from a patentable independent claim, but also because of the additional features of the invention they define. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

IV. Formal Matters and Conclusion

The claims have been editorially amended, above, to remove typographical and antecedent basis errors. These errors were principally related to word processing and typographical irregularities and do not substantively change the claims. Therefore, these claim changes are not intended to narrow or broaden the claims, but instead merely to eliminate typographical and antecedent-type errors.

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In view of the foregoing, Applicants submit that claims 1-37 and 39-45, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

Please charge any deficiencies and credit any overpayments to Attorney's Deposit
Account Number 09-0456.

Respectfully submitted,

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